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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/698,154

10/31/2003

Brian A. Leete

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06/28/2006

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EXAMINER

PARK, ILWOO

ART UNIT

PAPER NUMBER

2182

DATE MAILED: 06/28/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/698,154	LEETE, BRIAN A.	
	Examiner	Art Unit	
	Ilwoo Park	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 April 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 April 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1, 7, and 13 are amended in response to the last office action. Claims 1-18 are presented for examination.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Enhanced Host Controller Interface Specification for Universal Serial Bus (Rev. 0.96) [hereinafter, 'EHCI Spec'] in view of Hayter et al. [US 2002/0174255 A1].

As for claim 1, EHCI Spec teaches an apparatus comprising:

a host controller; and

a host controller driver [fig. 1-1],

wherein a plurality of banks [lists for normal qTD pointers and alternate qTD pointers] containing a plurality of queue element transfer descriptor (qTDs) are created for a plurality of buffers posted to the host controller driver, and the qTDs are circularly linked [sections 3.2 and 3.5].

Though EHCI Spec teaches there is overflow content for data packet transfer [babble condition: section 4.15.1.1.1], EHCI Spec does not support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store the overflow content of at least one buffer of the plurality of buffers. Hayter et al teach

transferring data packet using a plurality of qTDs [linked list descriptors: paragraphs 0027, 0031, 0077]; Hayter et al further teach there is overflow content for data packet transfer [paragraph 0076] and support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store [paragraphs 0084, 0085; fig. 6] the overflow content of at least one buffer of a plurality of buffers.

At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to support transferring overflow content, as taught by Hayter et al, instead of treating as a fatal error in the EHCI Spec.

4. As for claim 2, EHCI Spec teaches the host controller is an enhanced host controller interface.
5. As for claim 3, EHCI Spec teaches the banks are associated with a particular buffer in the plurality of buffers [section 3.5.2: alternate next qTD pointer pointing a buffer for a short packet].
6. As for claim 4, EHCI Spec teaches the plurality of buffers are ordered in an incremented order [section 3.5.4: qTD buffer page pointer list].
7. As for claim 5, EHCI Spec teaches a second buffer is executed upon an occurrence of a short packet in a first qTD associated with a first buffer, the first qTD having an alternated next pointer pointing to a first qTD of the second buffer [section 3.5.2: alternate next qTD pointer pointing a buffer for a short packet].
8. As for claim 6, Hayter et al teach a next pointer in each of the plurality of the qTDs in a first bank points to a next qTD in the first bank, a last qTD in the first bank

points to a first qTD in the first bank [paragraph 0077: both the ring and the linked list modes].

9. As for claim 7, EHCI Spec teaches an apparatus comprising:

a host controller; and

a host controller driver coupled to the host controller [fig. 1-1],

wherein the host controller arranges queue element transfer descriptor (qTDs) in a circularly linked order [sections 3.2 and 3.5].

Though EHCI Spec teaches there is overflow content for data packet transfer [babble condition: section 4.15.1.1.1], EHCI Spec does not support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store the overflow content of at least one buffer of the plurality of buffers. Hayter et al teach transferring data packet using a plurality of qTDs [ring and linked list descriptors: paragraphs 0027, 0031, 0077]; Hayter et al further teach there is overflow content for data packet transfer [paragraph 0076] and support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store [paragraphs 0084, 0085; fig. 6] the overflow content of at least one buffer of a plurality of buffers.

At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to support transferring overflow content, as taught by Hayter et al, instead of treating as a fatal error in the EHCI Spec.

10. As for claim 13, EHCI Spec teaches a system comprising:

a bus;

a first host controller coupled to the bus; and

a second host controller coupled to the first host controller [fig. 1-1],
wherein the first host controller arranges queue element transfer descriptor (qTDs) in a circularly linked order [sections 3.2 and 3.5].

Though EHCI Spec teaches there is overflow content for data packet transfer [babble condition: section 4.15.1.1.1], EHCI Spec does not support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store the overflow content of at least one buffer of the plurality of buffers. Hayter et al teach transferring data packet using a plurality of qTDs [ring and linked list descriptors: paragraphs 0027, 0031, 0077]; Hayter et al further teach there is overflow content for data packet transfer [paragraph 0076] and support transferring the overflow content by at least one qTD of the plurality of qTDs operating to store [paragraphs 0084, 0085; fig. 6] the overflow content of at least one buffer of a plurality of buffers.

At the time of the invention, one of ordinary skill in the art would have been motivated to combine the cited disclosures in order to support transferring overflow content, as taught by Hayter et al, instead of treating as a fatal error in the EHCI Spec.

11. As for claims 8-12 and 14-20, all the claimed limitations are discussed above.

Response to Arguments

12. Applicant's arguments with respect to claims 1-18 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

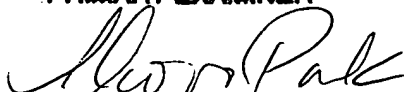
13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ilwoo Park whose telephone number is (571) 272-4155. The examiner can normally be reached on Monday through Friday from 9:00 AM to 5:30 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

ILWOO PARK
PRIMARY EXAMINER



Ilwoo Park

June 22, 2006